

No. 6.

WISCONSIN GEOLOGICAL AND

NATURAL HISTORY SURVEY.

E. A. BIRGE, Director.

**Hydrographic Map**

OF

**DELAVAN AND LAUDERDALE LAKES,**

**Walworth County, Wis.**

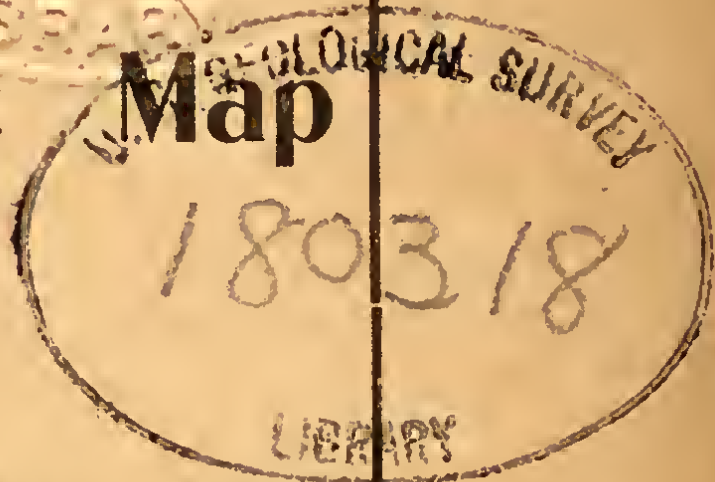
Hydrography in Charge of L. S. Smith.

Field Work by L. S. SMITH and

H. M. TRIPPE, 1898.

MADISON, WISCONSIN

1899



# Explanation of Map.

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This map shows the hydrography of Delavan lake and of the Lauderdale lakes, both by means of contour lines and of tints. Many of the soundings on which the maps are based were made during the winter of 1897-8 through the ice. Lines of soundings were run across the lakes in various directions and the position of each sounding was carefully determined by means of chain and transit. During the summer of 1898 the Lauderdale lakes were revisited and numerous additional soundings were made and the outline of the lakes was made much more accurate. There is no map which shows the outline of this lake with the same accuracy.

The position of the soundings is indicated on the map by means of black dots. In some places the depth of water is given in figures, and where this is done the decimal point in the number indicates the exact position of the sounding.

The outline of the lake indicates, of course, the outline of the water at its level in 1898. The line marked "10" indicates the 10 ft. level and is drawn through the points where the water has a depth 10 feet. It shows also what the outline of the lake would be if the water were lowered 10 feet. The next line marks the depth of 20 feet, and so on with the succeeding lines. The space between any line and that next inside of it indicates the distance required for the depth of the water to increase 10 feet. The lines therefore indicate the slope of the bottom. Where they are close together the slope is steep and where they are far apart the slope is correspondingly gradual.

In order to make plainer the shape of the basins, the depth of the water has been indicated by a blue color printed in four tints. The shoaler water to the depth of 10 feet has the lightest tint; the second tint indicates the depth from 10 to 30 feet; the third, from 30 to 50 feet; and the darkest tint is given to the deeper water below 50 feet.

The map shows plainly that Delavan lake is a broad, shallow basin, gradually increasing in depth from all sides toward the center, where a considerable area has a depth of more than 50 feet; the maximum depth found being 56.7 feet.

The Lauderdale lakes were originally a chain of three small ponds, lying in the moraine, and connected by a stream. They have been converted into a single lake by means of a dam at the outlet. There is, therefore, a very large area of shallow water surrounding each of the three basins. Green lake, the largest, reaches a maximum depth of 56.8 feet, while Middle and Mill lakes scarcely exceed 50 feet.

In the sections of the lakes the horizontal scale is the same as that of the map, while the vertical scale has been magnified three times. This enlargement of the vertical scale necessarily exaggerates in the same proportion the steepness of the slope of the bottom.



# HYDROGRAPHIC MAP OF DELAVAN AND LAUDERDALE LAKES

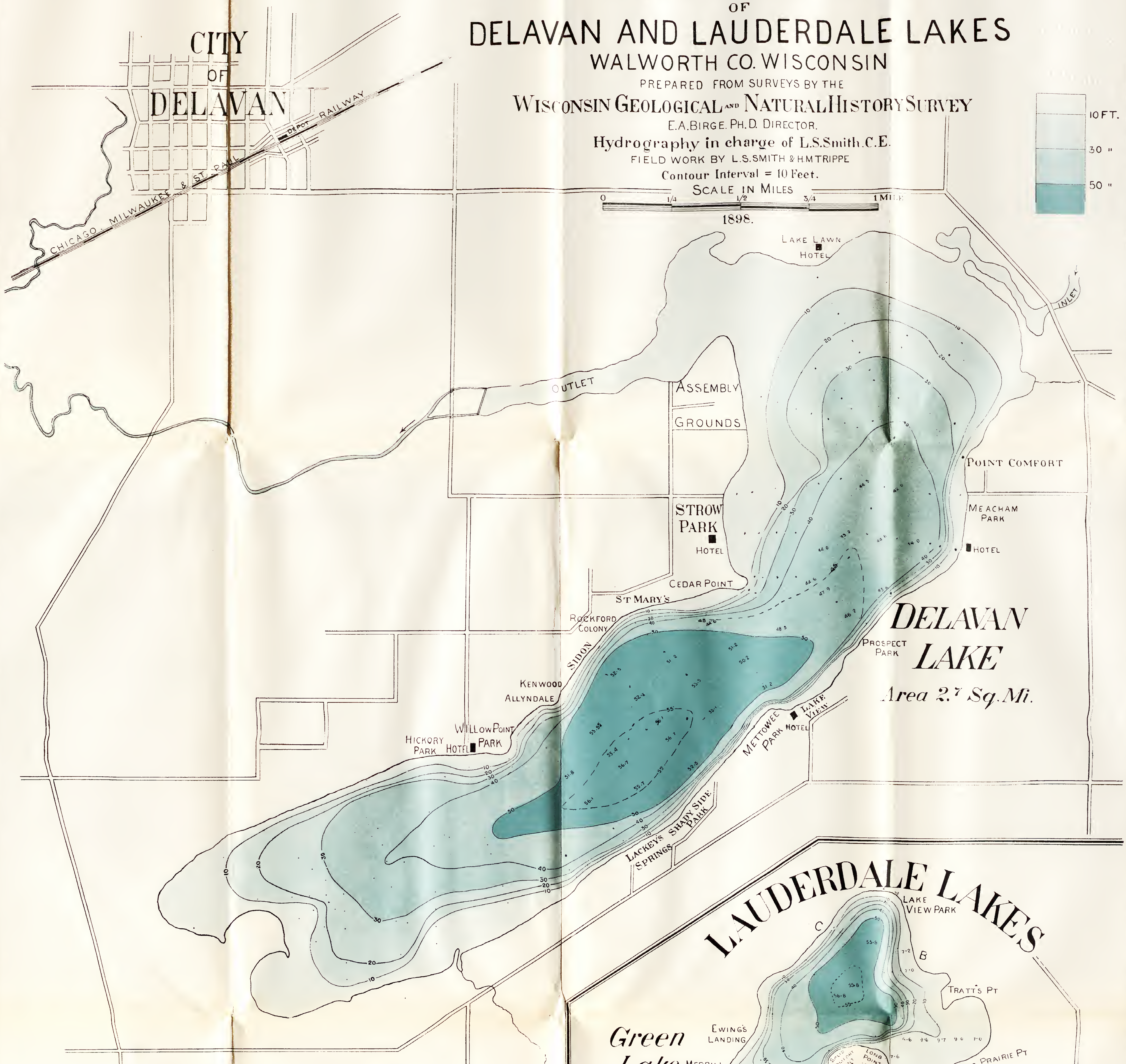
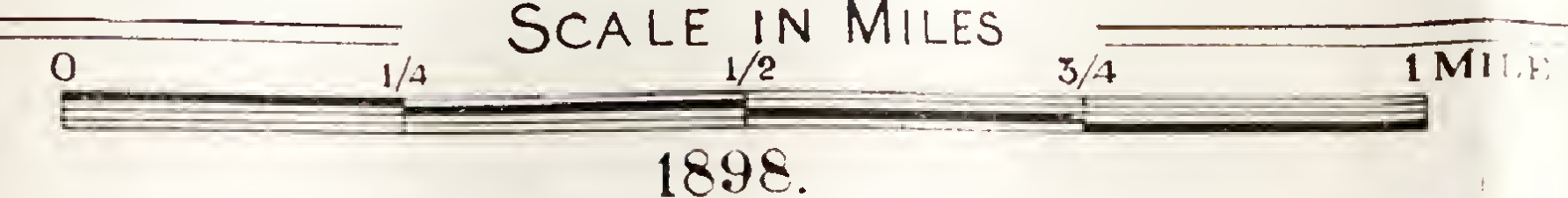
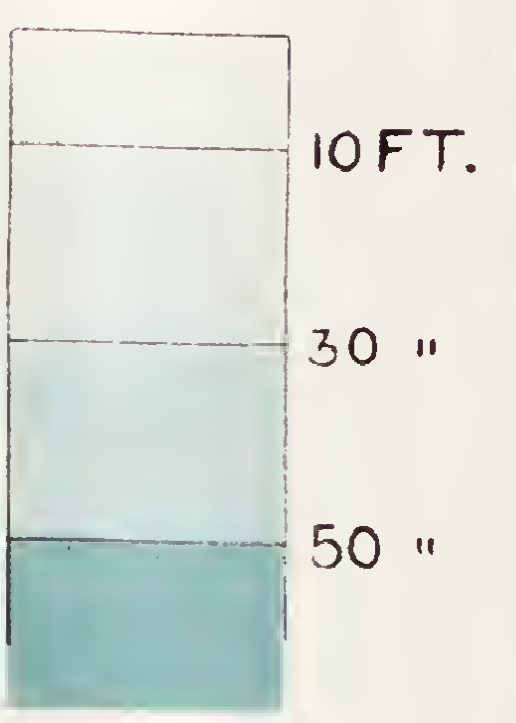
WALWORTH CO. WISCONSIN

PREPARED FROM SURVEYS BY THE  
WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY

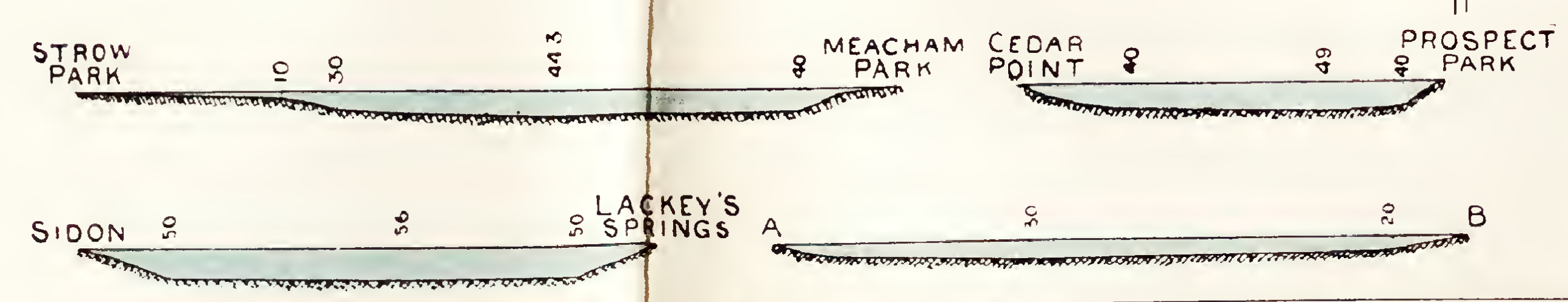
E.A. BIRGE, PH.D. DIRECTOR.  
Hydrography in charge of L.S. SMITH, C.E.  
FIELD WORK BY L.S. SMITH & H.M. TRIPPE

Contour Interval = 10 Feet.

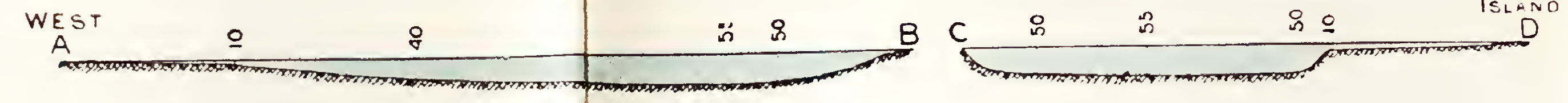
SCALE IN MILES



CROSS-SECTIONS OF DELAVAN LAKE



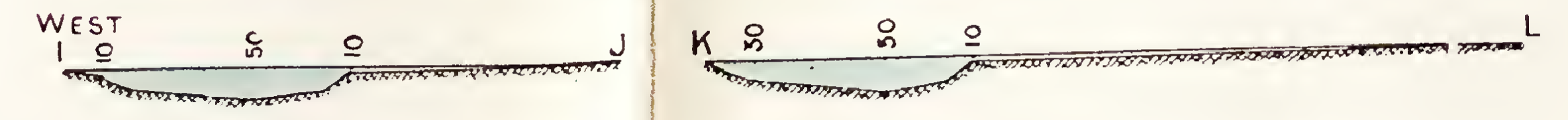
CROSS SECTIONS OF GREEN LAKE



CROSS-SECTIONS OF MIDDLE LAKE



CROSS-SECTIONS OF MILL LAKE



NOTE

THE HORIZONTAL SCALE OF THE ABOVE CROSS SECTIONS IS THE SAME AS THE MAP BUT THE VERTICAL SCALE HAS BEEN MAGNIFIED THREE TIMES

## LAUDERDALE LAKES

*Green Lake*

Area 282 A.

*Middle Lake*

Area 282 A.

*Mill Lake*

Area 304 A.

